Before The
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	PS Docket No. 11-153;
Facilitating the Development of Text-to-911	)	
And Other Next Generation Applications;	)	PS Docket No. 10-255
Framework for	)	
Next Generation 911 Deployment	)	

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While the nation's 911 system is less than 50 years old, Americans have grown to depend on an immediate connection to emergency services. Rapid technological changes in telecommunications have confused many Americans about the functional capabilities of emergency communications systems. The tragic shootings at Virginia Tech in 2007 highlight this problem. During the shootings, students unsuccessfully sent text messages to 911 for help.[1] Unfortunately, most Public Safety Answering Points (PSAPs) are not yet able to receive text messages. As consumers rely more and more on new modes of communication, emergency services must adapt.

Emergency service providers are starting to do that through the deployment of Next Generation 911 (NG911) services. NG911 uses Internet protocol technology and Internet-based communication links to interconnect PSAPs, allowing unlimited transfers of calls, distribution of overflow 911 calls to other centers, and other call-handling features. NG911 also enables the 911-system to accept and handle advanced information from citizens, including video, photos, and text messages. NG911 will allow the nation's emergency service providers to harness technological advancements in the field. For example, NG911 could allow a hearing impaired person to send a text message to 911, instantly transmit the medical records of a person in distress to a responding paramedic, and allow first responders to view

[1] Hannah Roberts, *Now you can text 911: Virginia Tech massacre exposed dire need for service after victims' SMS*

streaming video from an in-progress emergency. NG911 has the potential to radically change the way our emergency services function; efficient and cost-effective implementation of NG911 is critical to serving the public interest.

Implementing NG911 nationally will not be easy: "[t]he system is comprised of numerous jurisdictions (including over 6000 Public Safety Answering Points); a myriad of governance structures and controls which vary across state, county, and local jurisdictions; a ballooning number of service providers; and a diversity of funding amounts and models that differ across jurisdictional boundaries."[2] The Federal Communications Commission (FCC) has a number of technological objectives to accomplish for NG911 implementation to proceed efficiently. Localized deployment of new 911 systems has been historically inefficient and unwieldy, leading to delays, gaps in service, and inconsistent implementation. In order to avoid these pitfalls with NG911, the FCC should encourage states to create oversight bodies to facilitate the efficient and effective deployment of NG911 services.

I. INTRODUCTION

Today, more than 70% of 911 calls come from wireless phones, including smartphones.[3] The 911-system handles more than 650,000 calls a day, 450,000 of which are mobile phone calls.[4] Smartphone owners now constitute more than half of the mobile market in the United States, and more than two-thirds of buyers are opting for smartphones over "feature" wireless phones.[5] Beginning in 1998, the FCC and the federal government responded to this explosion in wireless phone usage by facilitating E911 deployments, improving the reliability of wireless 911 services and the accuracy of location

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[2] Phil Weiser, Dale Hatfield, & Brad Bernthal, *The Future of 9-1-1: New Technologies and the Need for Reform*, 6 J. TELECOMM. & HIGH TECH L. 213 (2008).

[3] Brock Butler, Susan Ahimovic, *Testing E911,* EE TIMES (Apr. 20, 2012, 2:58 PM) http://www.eetimes.com/design/test-and-measurement/4371428/Testing-E911.

[4] Julius Genachowski, Chairman, Fed. Comm. Comm'n, Prepared Remarks at Arlington County Emergency Center (Nov. 23, 2010).

[5] Devindra Hardawar, *The magic moment: Smartphones now half of all U.S. mobiles*, VENTURE BEAT, (Mar. 29, 2012, 7:00 AM), http://venturebeat.com/2012/03/29/the-magic-moment-smartphones-now-half-of-all-u-s-mobiles/; *See also,* Marguerite Reardon, *Smartphones to outsell feature phones in 2013 for the first time*, ClNET, (Mar. 4, 2013, 7:44 AM), http://news.cnet.com/8301-1035_3-57572349-94/smartphones-to-outsell-feature-phones-in-2013-for-first-time/.

transmissions. Just as technological change made E911 efforts necessary, NG911 services must now be implemented to meet the new demands and expectations that Americans have for their emergency communications.

State and local governments implement new 911 technologies. Historically, this implementation has been fragmented and decentralized. This fragmentation will hinder NG911 deployment efforts, leading to higher costs, delayed implementation, technological failures, and market inefficiencies. In 2011, the Communications Security, Reliability and Interoperability Council Working Group 4B, using available deployment data, determined that "where there is…no state coordination, the level of 911 services is fragmented and in some cases non-existent."[6] To successfully implement NG911 technologies, past strategies must be reconsidered and updated. In 2009, the E911 Grant Program awarded 30 states and territories more than $40 million to fund upgrades to PSAP equipment and operations and to prepare for next generation technologies.[7] The National Highway Traffic Safety Administration (NHTSA), the National Telecommunications Information Administration (NTIA), and the Department of Commerce dispersed these grants.[8] Concurrently, the ENHANCE Act required the FCC to report on attendant technical concerns, and gave it the power to grant or deny waivers of compliance filed by carriers.[9] A number of disparate federal agencies now play a role in NG911 funding and deployment. In 2012, the Middle Class Tax Relief and Job Creation Act directed NHTSA and NTIA to award $115 million of grants to further support 911 service improvements.[10] Efficient dispersal of these grants requires a systematic plan for federal and state cooperation. The FCC is currently considering technological,

[6] Communications Security, Reliability and Interoperability Council, Working Group 4B, Transition to Next Generation 9-1-1 Final Report, §5.2.3.2.1, Mar. 2011, *available at* http://transition.fcc.gov/pshs/docs/csric/CSRIC-WG4B-Final-Report.pdf.
[7] Ensuring Needed Help Arrives Near Callers Employing 911 Act of 2004 (ENHANCE Act), P. L. No. 108-498, 118 Stat. 3987-88.
[8] Final Rule, 47 C.F.R. pt. 400, ("This joint Final Rule implements the E-911 grant program authorized under the Ensuring Needed Help Arrives Near Callers Employing 911 (ENHANCE 911) Act of 2004.")
[9] ENHANCE 911 Act, *supra* note 7, at §106, 107.
[10] Middle Class Tax Relief and Job Creation Act of 2012, P.L. 112-96, 126 Stat. 156.

operational, regulatory, and economic requirements necessary for NG911 deployment,[11] and has the chance to encourage cooperation and common-goal setting on both a state and federal level.

The Commission should promote state oversight bodies to encourage the rapid deployment of NG911. The Commission should also work with other federal agencies to encourage the cooperative goal of fostering state-level oversight boards. Just as fragmentation on the local level hinders efficient implementation of advanced emergency services, fragmented federal oversight and grant disbursal makes it harder to improve state-level management. The FCC has an opportunity to encourage cooperation among federal agencies in a way that will promote a more coordinated framework from the top down. This approach would advance the public interest, U.S. emergency communications policy, and Congressional intent.

A growing number of telecommunications experts, emergency communications organizations, and federal agencies now support the promotion of state-level oversight bodies to ensure timely and efficient implementation of NG911. In the past, the federal government has set standards and targets for emergency communications, such as the establishment of 911 as the universal emergency assistance number in 1999,[12] and the FCC's rulemakings to address technological and social vulnerabilities of the 911 system in the E911 proceedings.[13] However, implementation of 911 services and technologies has ultimately depended on the management of state and local governments and this continues to be the case. Encouraging local cooperation via state oversight boards would allow the Commission to further its goals for implementation while remaining within its statutory authority.

Statewide oversight bodies would provide the most successful governance structure for the deployment of NG911 services across the nation. Oversight bodies could expedite timely nationwide NG911 deployment by encouraging PSAP coordination in adopting NG911 technologies, creating

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[11] *See* Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, Framework of Next Generation 911 Deployment, *Further Notice of Proposed Rulemaking,* FCC Rcd. 12-149 (2012) ("*FPRM*").
[12] Peter P. Ten Eyck, Note, *Dial 911 and Report a Congressional Empty Promise: The Wireless Communications and Public Safety Act of 1999,* 54 FED. COMM. L.J. 53, 61 (2001) (analyzing Congressional action via 1999 Act).
[13] E.g. implementing enhanced 911 services in order to address the growing concerns of wireless cellular calls; reaching out to PSAPs; extending 911 obligations to Voice-Over-Internet –Protocol Providers.

economies of scale in cooperative deployment, incentivizing statewide PSAP technology upgrades, ensuring standardization of equipment and operating procedures, and dispersing funding throughout the state to ensure consistent deployment. Even after deployment is complete, state oversight bodies could monitor the maintenance of NG911 infrastructure, coordinate further improvements, and promote public awareness and education.

II. COOPERATION AND COORDINATION AT A STATE LEVEL IS NECESSARY FOR CONSISTENT AND EFFICIENT NG911 DEPLOYMENT

Recent research and prominent authorities in emergency communications have concluded that states with centralized oversight bodies are more successful in the deployment and funding of new 911 services. They suggest that NG911 will be severely handicapped if nationwide deployment proceeds without first addressing the organizational limitations of the current system. In a 2007 study, authors Dale Hatfield, Brad Bernthal, and Phil Weiser concluded: "the empowerment of a state 9-1-1 entity makes a material difference in facilitating faster adoption of advanced 9-1-1 technology."[14] In the 2008 report about NG911 implementation, the National Emergency Number Association's (NENA) identified the establishment of a state-level organization to plan, coordinate, and implement NG911 systems as its first objective. "The link between [statewide planning and coordination] and the vision of NG9-1-1 is clear. Many key features and functions of NG911 will require an effective state-level leadership and coordination mechanism to be in place."[15]

In 2009, the U.S. Department of Transportation's Intelligent Transportation Systems Joint Program Office (ITS) recommended, "identifying a state agency or other effective state-mechanism to be responsible for statewide 911 planning and coordination, and granting it appropriate authority and

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[14] DALE HATFIELD, BRAD BERNTHAL, PHIL WEISER, *Health of the US 911 System*, 911 Industry Alliance.
[15] NATIONAL EMERGENCY NUMBER ASSOCIATION, *A Policy Maker Blueprint for Transitioning to the Next Generation 9-1-1 System*, 4 Sept. 2008, *available at* http://c.ymcdn.com/sites/www.nena.org/resource/collection/B6781C63-012C-4E90-939B-001733976BBC/Policy_Maker_Blueprint_for_Transition_to_NG9-1-1.pdf.

power."[16] In 2011, the Communications Security, Reliability and Interoperability Council Working Group 4B also proposed a state-level coordinating body:

> State-level 9-1-1 leadership and coordination is required... The 'network of interconnected networks' for each state will ultimately be statewide. That type of interconnected environment will logically require state-level ESInet [Interconnection to NG911 networks] functions that must be addressed and managed at that level. For many states, this will mean new state-level duties and responsibilities... States must manage transitions to NG9-1-1 according to a comprehensive plan, which will involve oversight and coordination activities.[17]

NG911 implementation shares many characteristics with the E911 efforts of the past decade. In its 2009 report, the ITS stressed that a centralized state body could coordinate information sharing and establish a common technology platform. One of the key lessons learned from past E9-1-1 implementations is the effective role of statewide coordination in focusing priorities for funding and support of the 911 service.[18]

The 2002 Hatfield Report recommended that the Commission "continue to urge the creation of organizations at the state, regional, and local levels of government that can act as a coordinative body in the rollout of wireless E911 services."[19] This recommendation was a direct response to concerns that the lack of coordination was stifling deployment of new 911 technologies.

These studies and organizational recommendations emphasize the need for state-level oversight and organization in the deployment of NG911 services. Further, they show that a lack of such coordination has impeded implementation of 911 services in the past and will continue to do so in the future if not addressed. In particular, Hatfield, et al. emphasized the need for state bodies to oversee education, consistent funding, and accountability, and the importance of those functions in facilitating

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[16] UNITED STATES DEPARTMENT OF TRANSPORTATION, INTELLIGENT TRANSPORTATION SYSTEMS, *Next Generation 9-1-1 (NG9-1-1) System Initiative Transition Plan*, 21 (Feb. 2009), *available at* http://www.its.dot.gov/ng911/pdf/NG911_Transition_PlanFinal.pdf.

[17] \Working Group 4B, *supra* note 6, at §4.3.2.5,.

[18] INTELLIGENT TRANSPORTATION SYSTEMS, *supra* note 10, at 20.

[19] DALE N. HATFIELD, *A Report on Technical and Operational Issues Impacting The Provision of Wireless Enhanced 911 Services*, Oct. 2002, *available at* http://c.ymcdn.com/sites/www.nena.org/resource/collection/22DBDB9D-FBD7-445E-A760-1C39A222ED34/Hatfieldreport_1.pdf.

adoption.[20] The degree of state-level oversight of emergency services runs along a spectrum, but over a dozen states currently have no centralized emergency service authority.[21] A comparison of various states shows that 911 services have been implemented more efficiently and effectively in those with such oversight bodies than in those without.[22]

NG911 services rely on Internet protocol and interconnection to function, making integration and uniformity among PSAPs and first responders critical for effective operation. Upgrading systems to be NG911 capable requires switching from analog to broadband facilities. Internet protocol system architectures will provide faster processing times and improved response capabilities, but these benefits require both technological upgrades and changes to standard operating procedures. The technological complexities of NG911 make cooperation and coordination on the state and regional levels vital for successful implementation. Encouraging states to create the necessary oversight bodies falls within the Commission's mandate to encourage the development and rapid deployment of new technologies for the public's benefit.

These state-level oversight bodies should have the authority to coordinate and implement NG911 strategies and should bear the responsibility for establishing and adhering to a statewide plan for implementation. In its oversight capacity, a state board would make decisions involving the technical aspects of implementation. It would also oversee local PSAPs to ensure compliance. These boards should

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[20] HATFIELD, WEISER, BERNTHAL, *Health of the U.S. 911 System*, *supra* note 8, at 46.

[21] KIMBALL, *Model State 9-1-1 Plan*, July 2008 at 17-18, *available* at http://www.co9-1-1resourcecenter.org/model_state_9-1-1_plan_merged%5B1%5D.pdf (noting the significant differences among state-level 911 planning. For example, Alaska, Louisiana, and Nevada have no state-level planning or coordination mechanism of any sort; while Washington D.C. is 'state' that has a state-level 911 authority that operates a single statewide system with a single, state-operated PSAP.).

[22] HATFIELD, WEISER, BERNTHAL, *Health of the U.S. 911 System*, *supra* note 8, at 45 ("Compare, for example, Indiana and Ohio. In Indiana, as noted above, the state established a well-funded and empowered state wireless 9-1-1 Board with a professional executive director (currently, Ken Lowden). Consequently, it has not only implemented Phase II wireless access throughout the state, it has also developed an advanced infrastructure and emerged as a leader in migrating toward an NG9-1-1 system. Notably, Indiana has enabled non-traditional entities—like telematics services and SMS messages (on a trial basis)—to gain access to the 9-1-1 network. Meanwhile, in Ohio, there is no statewide oversight and the state relies on an advisory board structure that leaves each PSAP free to act autonomously. Notably, even though Ohio collects some 9-1-1 funding at the state level, it automatically disperses it to the local agencies and provides no accountability for how it is spent. Not surprisingly, Ohio has yet to complete the transition to Phase II wireless and, except for some local efforts (like Hamilton County), has not progressed toward an NG9-1-1 system").

also have authority over emergency services funding and allocation, including the dispersal of federal grants. Oversight boards would ideally be made up of PSAP heads, industry participants, and leaders of state level public interest groups, lead by an elected executive director.

III. THE COMMISSION SHOULD ADOPT THE POSITION THAT STATE OVERSIGHT BODIES ARE VITAL TO THE TECHNICAL GOALS OF THE 911-SYSTEM

The successful implementation of the FCC's technical rules for NG911 will depend on efficient and coordinated deployment efforts. The establishment of state oversight bodies is necessary for coordinated deployment efforts. Thus, the FCC should adopt the position that state oversight bodies are vital to achieving the technical goals of the 911-system. In taking this position, the Commission should promote the adoption and use of a state oversight body in all its deliberations and interactions with state, local, and municipal governments and other federal agencies.

The FCC should also promote this position within its own rulemakings. In particular, the FCC's requirements for NG911 implementation by the providers and carriers subject to these regulations should specifically assume the existence of state oversight bodies, whenever appropriate, as part of the preferred governance structure under its rules. For example, the FCC's technical rules could require wireless providers to work with an extant state oversight body, thus incentivizing states to create those bodies. Opportunities for such regulations will be plentiful, because the NG911 technical rules are still at a very early stage. Also, in deliberations with federal grant-making agencies and Congress, the FCC should promote state oversight bodies as an explicit requirement for eligibility for federal NG911 funds.

Thus, the FCC will have several opportunities to promote state oversight body within its own rulemaking and regulations during the deployment of NG911.

IV. THE COMMISSION HAS THE AUTHORITY TO ADOPT THE POSITION THAT STATE OVERSIGHT BODIES ARE VITAL TO THE TECHNICAL GOALS OF THE 911-SYSTEM

The Commission is required, under 47 U.S.C. § 309(j)(3), to encourage "(A) the development and rapid deployment of new technologies, products, and service for the benefit of the public . . . without

administrative or judicial delays."[23] The Commission's encouragement of state-level oversight bodies would also be consistent with federal 911 legislation. In the Wireless Communications and Public Safety Act of 1999, Congress found that: "the rapid, efficient deployment of emergency telecommunications service requires statewide coordination of the efforts of local public safety, fire service, and law enforcement officials, emergency dispatch providers, and transportation officials."[24] In the context of a universal emergency telephone number, the Act states: "[t]he Commission shall encourage each State to develop and implement coordinated statewide deployment plans."[25] The Wireless Communications and Public Safety Act also expressed approval of state-level implementation bodies and directed the Commission to encourage each State to facilitate the development and implementation of "coordinated statewide deployment plans through an entity designated by the governor."[26]

This Commission action will reinforce congressional goals of facilitating cooperation and coordination among the federal, state, county, local, or tribal governments in emergency communication services. In a 2009 Congressional Research Service Report, Linda K. Moore recommended that Congress "identify[] the federal role in implementing national policies for emergency communications without eroding state and local authority," to facilitate the most effective nationwide 911 service.[27] Statewide oversight bodies charged with upgrading emergency services maintain state authority while also providing uniformity and accountability on a national level. Therefore, the Commission's encouragement of state oversight bodies supports the current policy goals of nationwide NG911 deployment, the Commission's emergency communications mission, and Congressional goals.

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[23] 47 U.S.C. § 309(j)(3).
[24] Wireless Communications and Public Safety Act of 1999, P.L. 106-81, 113 Stat. 1286.
[25] *Id*.
[26] *Id*. at §3(b).
[27] LINDA K. MOORE, CONG. RESEARCH SERV., RL31340, EMERGENCY COMMUNICATIONS: THE FUTURE OF 911 19 (2009).

V. THE PUBLIC INTEREST SUPPORTS COMMISSION ACTION

While local authorities may be reluctant to lose some of their control over emergency services to state-level oversight bodies, the benefits of greater coordination and the interoperability inherent in NG911 technologies should allay this concern. With past 911 systems and technologies, uniformity and cooperation between individual PSAPs has been less imperative. However, the numerous communications platforms linked to NG911 are inherently interconnected, which will require a greater degree of cooperation and coordination that is best accomplished at the state level. Centralized state bodies will be able to maximize economies of scale, establish the coordination of information sharing and cooperation, and secure and disperse reliable funding.[28] Due to the significant state and federal interests in encouraging NG911 deployment, and the established advantages of 911 oversight bodies in accomplishing that goal, local reluctance to cede control to state oversight bodies should not prevent the Commission from promoting their creation.

The encouragement of statewide governing bodies will reinforce the Commission's dedication to public safety and emergency communication efforts. Following the proposed rulemaking, Chairman Genachowski held: "[Emergencies] remind us of the vital importance of our mission to harness the power of communications technology to enhance public safety and save lives, and of the need to ensure that our emergency response systems keep pace with how people communicate."[29] By encouraging state leadership, the FCC will ultimately improve the public's access to emergency assistance.

VI. CONCLUSION

The FCC should promote state oversight bodies as vital to the technical goals of the 911-system, and has the authority to do so. The creation of statewide oversight bodies will result in a more effective and timely deployment of NG911 services across the United States. In order to meet the public's expectations for emergencies, the FCC must encourage coordination of NG911 deployment at both the

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[28] HATFIELD, BERNTHAL, WEISER, *Health of the U.S. 911 System*, *supra* note 8 at 43.
[29] *FPRM, supra* note 11, (statement of Julius Genachowski, Chairman, Fed. Comm. Comm'n).

state and national level. Without sufficient cooperation and oversight, NG911 services will not achieve their full potential for advancing the public interest in emergency communications.

Respectfully submitted,

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